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Hi Paul

I have written a short history of the locks on the Swansea Canal. You can use it in the Bwletin if you want to. The information has not been used in any other publication to date, other than minor details in Bradshaws in 1804. I will not be offended if you do not want to publish it.

Clive

There were 36 locks constructed along the Swansea Canal between 1794 and 1798 to raise the canal from sea level at Swansea up to the level of the canal terminus at Hen Noyadd, 372 feet above sea level. An additional barge lock into the North Dock was built in 1852. What is surprising about the locks construction is that no two were built with similar dimensions. They had different rises to raise the canal as it progressed up the valley, with lock number lock 3 at 6ft 4inches rise, lock 20 at 7ft 7inches rise, lock 22 at 13ft 2inches rise. There were different widths of lock chamber; lock 1 had a width of 9ft, lock 17 a width of 8ft, and lock 29 a width of 8ft 4inches. The lengths between the lock gates were different. Lock 9 was 73 ft long, lock 17 at 71 ft, and lock 35 was 69 ft long. Given these basic facts, it would have been difficult for maintenance of the locks. The lock gates were of different dimensions, so the canal company could not keep a stock of spare gates in reserve to replace gates as it became necessary. Masonry repairs were not a problem.

However, for the barges using the locks it was another matter. Publications give different dimensions of Swansea Canal barges, Bradshaw as about 65 feet long by 7ft 6ins beam capable of carrying 25 tons of cargo, and Hadfield as 69 feet long. When the locks were operating, they had to consider the volume of water used in passing a barge through the lock. With a narrow lock, on average about 30,000 gallons of water was used each time a barge used a lock. If the locks were built to a wider dimension with more space between the lock walls and the barge, then additional water was wasted in that operation. To minimise water wastage, the barges and locks were constructed with as little space between the barge and the lock chamber wall as possible. Lock number 33 was constructed with a width of 7ft 11inches. That allowed for only two and a half inches either side of the barge. A piece of timber, or branch of a tree, or even thick vegetation in the lock at the same time as barge would jam the barge tightly in the lock. Lock number 9 was 73 feet between the gates, and that would add an additional 250 cubic feet of water used in each operation. In the peak period of Swansea Canal carrying, between 1880-1900, when over 18,000 barges travelled the canal each year, the water loss due to poor lock design and construction was in the region of tens of thousands of gallons of water per annum.

Bradshaw gives the Swansea Canal locks numbered as number 1 at Hen Noyadd down to Swansea at number 36. They were in fact the opposite with number one at Swansea. The Great Western Railway plan of the Swansea Canal shows the locks as usually arranged in pairs with one flight of six locks at

Godre'r Graig. There were in total eight locks at Godre'r Graig, numbers 15 to 22, with the steepest rise on the canal. The locks had numbers, or discs on the lock gate beams. Only one disc is known to survive, found by Mr Gordon House at Ystradgynlais in 1974. This is now in the national collection. Steve Hughes considered this to be a G.W.R. number disc installed after the railway company took over the canal in 1872.

Elderly people living at Pontardawe and Ystalyfera often referred to locks by nicknames whilst speaking of the canal, for example Gilbertson's lock at Pontardawe, or Fountain Hall lock at Pantyffynon. The names of a local industry or an important personage often led people to speak of a lock in that vicinity. Those nicknames led me to research and try to compile a list of the nicknames for all the locks on the Swansea Canal. The majority of the names are those used locally up to the 1990's.

<u>Lock No.</u>	<u>location</u>	<u>Lock Name</u>	<u>Reason for name</u>
1	Swansea	Swansea lock	at Swansea
2	Swansea	Pottery lock	near Swansea potteries
3	Hafod	Maliphant lock	after Mr Maliphant, lock builder 1794
4	Hafod	Maliphant lock	after Mr Maliphant, lock builder 1794
5	Clydach	Player's lock	after Player's tinsplate works
6	Clydach	Mond Lock	after Mond nickel works (1902)
7	Clydach		
8	Trebanos	Green lock	at Green Farm
9	Trebanos	Trebanos lock	at Trebanos
10	Pontardawe	Parson's lock	after Parson's tinsplate works (1838)
11	Pontardawe	Gilbertson's lock	after Gilbertson's steelworks (1890)
12	Ynysmeudwy	Ynysmeudwy lock	at Ynysmeudwy
13	Ynysmeudwy	Ynysmeudwy lock	at Ynysmeudwy
14	Cilmaengwyn		
15	Godre'r Graig		
16	Godre'r Graig	Crimea lock	near Crimea colliery (1856)
17	Godre'r Graig	Thick's lock	after Mr Thick
18	Godre'r Graig	lock newydd	probably rebuilt 1830's
19	Pantyffynon	lock fach	the small lock (Ynyscedwyn Est.' 1838)
20	Pantyffynon	lock Isa'r Shop	lock below the workshops (ditto)
21	Pantyffynon	lock Ucha'r shop	lock above the workshops (ditto)
22	Ystalyfera	lock Y Jones	Benjamin Jones canal engineer (ditto)
23	Ystalyfera		
24	Ystalyfera	Ystalyfera lock	in Ystalyfera
25	Ystradgynlais	Ynyscedwyn lock	near Ynyscedwyn House
26	Ystradgynlais		
27	Ystradgynlais		
28	Ystradgynlais	Pengorof lock	at Pengorof Farm
29	Ystradgynlais	Pelican lock	at Pelican Street
30	Cwmgiedd	Lock y Metz	near Metz Cottages
31	Ynys Isaf	lock y Ynys	near Ynys Chapel
32	Ynys Uchaf	lock yr Hebog	near Yr Hebog Farm
33	Ynys Uchaf	White lion lock	near White Lion pub
34	Caerbont	Castle lock	Castle Hotel
35	Caer Lan	lock y Bont	named after the bridge nearby
36	Caer lan	lock Bydafai	brickworks kilns

Bydafai is the Welsh name for a beehive kiln. There were several brick kilns near the canal at lock 36.

Lock 18 was known as the narrow lock during the 1950's and 60's by British Waterways staff employed on maintenance on the Swansea Canal. Mr John Hutchins told me that the geological pressure of the mountain alongside the lock used to squeeze the lock walls of the chamber together until it was no more than five feet wide at its narrowest part. He had to use large industrial jacks to force the walls apart about every five years or so. This lock was first recorded as a being compressed by pressure from the mountain in 1830, in the Swansea Canal Minute Books.

An Ynyscedwyn Estate Plan at the W.G.Archive Office of the farmlands at Y Cyfing (Ystalyfera), was surveyed by Philip Thomas in 1838. This names five locks at Godre'r Graig. The locks below and above the workshops referred to the Swansea Canal Company workshops at Pantyffynnon.

The names of the locks at Ystradgynlais and Cwmgiedd (locks 29 to 35), were provided by Mr Tom Ashford of the Ynys, Cwmgiedd c 1982.

Mr Glyn Rees of Godre'r Graig provided the names of the locks at Godre'r Graig as he remembered them in the 1930's and 40's. Lock 22 was Fountain Hall lock; lock 17 was Mona's lock after Mr Rees' auntie Mona who lived nearby. Lock 19 was Danny Rees's lock. He lived alongside that lock. Lock 20 was Jack White's lock.

Maliphant locks information, (locks 4 and 5) is taken from Swansea's Districts and Villages by Norman Lewis Thomas.

The dimensions of the locks is taken from the G.W.R. Swansea Canal Plan c 1882 held at the PRO.

Best Wishes

Clive Reed 20 August 2013

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